

REMARKS

Reconsideration of this application, as amended, is respectfully requested.

The Applicants wish to draw the Examiner's attention to the Applicants' related co-pending applications and issued patents (see updated Appendix A) directed to nanoparticles and methods of preparation and use thereof.

Further to the Applicant's prior response filed on June 18, 2003, the Applicants note that the Examiner still did not return executed copies of the PTO 1449 forms for the 7th Supp. Information disclosure statement filed on May 1, 2003. The Applicants request that the Examiner fully execute the PTO 1449 form for the 7th Supp. IDS and return a copy of the same to the undersigned representative. A copy of the 7th Supplemental IDSs, associated PTO 1449 form, and PTO stamped postcard acknowledging receipt of the IDS, PTO 1449 form and references are attached. The Examiner is requested to contact the undersigned representative if the Examiner would like to have another copy of the references.

Claims 237-265 and 433-446 were pending in this application. Without prejudice or disclaimer, claims 237-265 and 438 were cancelled and claims 433, 439 and 444 were amended in order to correct claim dependencies and to expedite the allowance of this application as the Examiner had indicated that claims 438-446 would be allowable if placed into independent format. Claim 433 was amended to incorporate the subject matter of cancelled claim 438. This amendment does not constitute new matter.

Turning to the office action, claims 238-242, and 433-437 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 237, 239-242 of allowed co-pending application No. 09/976,577. A terminal disclaimer is attached. Accordingly, the Applicants submit that the obviousness-type double patenting rejection has been overcome.

Claims 243-265 have been provisionally rejected under 35 U.S.C. section 101 as claiming the same invention as claims 243-265 of co-pending application No. 09/976,618. Since claims 243-265 in the instant application had been cancelled, the Applicants respectfully submit that the double patenting (same invention) rejection no longer applies.

Claims 237, 241-247, 251 and 252 stand rejected under 35 U.S.C. section 102(e) as being anticipated by, or in the alternative, under 35 USC section 103(a) as being obvious over

Yguerabide (U.S. Patent No. 6,214,560)("Yguerabide"). The Applicants respectfully traverse this rejection and submit, without commenting on the merits or lack thereof of the rejection, that the rejection is moot in light of the present amendment which cancelled the aforementioned claims.

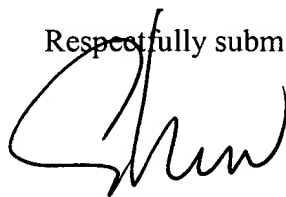
In conclusion, the Applicants respectfully submit that the claims in this application are in allowable condition and request a Notice to this effect.

Reconsideration of this application is respectfully requested and a favorable determination is earnestly solicited. The Examiner is invited to contact the undersigned representative if the Examiner believes that this would be helpful in expediting the prosecution of this application.

Dated: _____

3/3/04

Respectfully submitted,



Emily Miao
Reg. No. 35,285

McDonnell Boehnen
Hulbert & Berghoff
300 South Wacker Drive
Chicago, IL 60606
Telephone: 312-913-0001
Facsimile: 312-913-0001



March 3, 2004

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APPENDIX A**RECEIVED****MAR 10 2004**

ATTY Case No.	Serial No./ Filing Date	Inventors/Title	Status
00-653-A	U.S. 09/927,777 Filed 8/10/01	Mirkin, Letsinger, Mucic, Storhoff, Elghanian, Taton, Garamella, Li, Park/ NANOPARTICLES HAVING OLIGONUCLEOTI DES ATTACHED THERETO AND USES THEREFORE	ALLOWED
00-713-B1	09/923,625 Filed 8/7/01	Mirkin, Letsinger, Mucic, Storhoff, Elghanian/ NANOPARTICLES HAVING OLIGONUCLEOTI DES ATTACHED THERETO AND USES THEREFOR	ALLOWED
00-713-C	09/344,667, filed 6/25/99	Mirkin, Letsinger, Mucic, Storhoff, Elghanian/ NANOPARTICLES HAVING OLIGONUCLEOTI DES ATTACHED THERETO AND USES THEREFORE	U.S. Patent No. 6,361,944, issued 3/26/02
00-713-I	U.S.S.N 09/603,830 Filed 6/26/00	Mirkin, Letsinger, Mucic, Storhoff, Elghanian, Taton; NANOPARTICLES HAVING OLIGONUCLEOTI DES ATTACHED THERETO AND USES THEREFOR	U.S. Patent No. 6,506,564, issued 1/14/03
00-713-I-1	09/961,949 9/20/01	Mirkin, Letsinger, Mucic, Storhoff, Elghanian, Taton;	U.S. Patent No. 6,582,921, issued June 24, 2003

ATTY Case No.	Serial No./ Filing Date	Inventors/Title	Status
		NANOPARTICLES HAVING OLIGONUCLEOTI DES ATTACHED THERE TO AND USES THEREFOR	
00-713-I-2	09/957,318 9/20/01	See 00-713-I-1	ALLOWED
00-713-I-3	09/957,313 9/20/01	See 00-713-I-1	U.S. Patent No. 6,645,721, issued 11/11/03
00-713-I-4	09/966,491 9/28/01	See 00-713-I-1	U.S. Patent No. 6,610,491, issued August 26, 2003
00-713-I-5	09/966,312 9/28/01	See 00-713-I-1	U.S. Patent No. 6,673,548, issued January 6, 2004
00-713-I-6	09/967,409 9/28/01	See 00-713-I-1	ALLOWED
00-713-I-7	09/974,500 10/10/01	See 00-713-I-1	ALLOWED
00-713-I-8	09/974,007 10/10/01	See 00-713-I-1	PENDING
00-713-I-9	09/973,638 10/10/01	See 00-713-I-1	PENDING
00-713-I-10	09/973,788 10/10/01	See 00-713-I-1	ALLOWED
00-713-I-11	09/975,062 10/11/01	See 00-713-I-1	U.S. Patent No. 6,677,122, issued January 13, 2004
00-713-I-12	09/975,376 10/11/01	See 00-713-I-1	PENDING
00-713-I-13	09/975,384 10/11/01	See 00-713-I-1	PENDING

ATTY Case No.	Serial No./ Filing Date	Inventors/Title	Status
00-713-I-14	09/975,498 10/11/01	See 00-713-I-1	ALLOWED
00-713-I-15	09/975,059 11/11/01	See 00-713-I-1	ALLOWED
00-713-I-16	09/976,601 10/12/01	See 00-713-I-1	PENDING
00-713-I-17	09/976,968 10/12/01	See 00-713-I-1	PENDING
00-713-I-18	09/976,971 10/12/01	See 00-713-I-1	U.S. Patent No. 6,682,895, issued 1/27/04
00-713-I-19	09/976,863 10/12/01	See 00-713-I-1	PENDING
00-713-I-20	09/976,577 10/12/01	See 00-713-I-1	ALLOWED
00-713-I-21	09/976,618 10/12/01	See 00-713-I-1	ALLOWED
00-713-I-22	09/981,344 10/15/01	See 00-713-I-1	ALLOWED
00-713-I-23	09/976,900 10/12/01	See 00-713-I-1	PENDING
00-713-I-24	09/976,617 10/12/01	See 00-713-I-1	ALLOWED
00-713-I-25	09/976,378 10/12/01	See 00-713-I-1	PENDING
00-713-i-26	10/410,324 04/10/03	See 00-713-I-1	PENDING
00-713-L	U.S.S.N. 09/693,005 Filed 10/20/00	Mirkin, Letsinger, Mucic, Storhoff, Elghanian/ NANOPARTICLES HAVING OLIGONUCLEOTI	U.S. Patent No. 6,495,324, issued 12/17/02

ATTY Case No.	Serial No./ Filing Date	Inventors/Title	Status
		DES ATTACHED THERETO AND USES THEREFORE	
00-713-M	U.S.S.N. 09/693,352 Filed 10/20/00	Mirkin, Letsinger, Mucic, Storhoff, Elghanian/ NANOPARTICLES HAVING OLIGONUCLEOTI DES ATTACHED THERETO AND USES THEREFORE	U.S. Patent No. 6,417,340, issued 7/9/02
00-714-G	U.S. 09/830,620 Filed 8/15/01	Mirkin, Nguyen/ NANOPARTICLES WITH POLYMER SHELLS	PENDING
00-715-A	U.S. 09/760,500 Filed 1/12/01	Mirkin, Letsinger, Mucic, Storhoff, Elghanian, Taton; Garamella, Li/ METHOD OF ATTACHING OLIGONUCLEOTI DES TO NANOPARTICLES AND PRODUCTS PRODUCED THEREBY	ALLOWED
00-1085-A	U.S.S.N. 09/820,279 Filed 3/28/01	Mirkin, Letsinger, etc./ METHOD AND MATERIALS FOR ASSAYING BIOLOGICAL MATERIALS	ALLOWED
00-1085-G	U.S.S.N. 10/640,618 Filed 8/13/03	Mirkin, Letsinger, etc./ METHOD AND MATERIALS FOR ASSAYING BIOLOGICAL MATERIALS	
00-1086-A	U.S. 09/903,461 Filed 7/11/01	Letsinger, Garimella/ METHOD OF DETECTION BY ENHANCEMENT	U.S. Patent No. 6,602,669, Filed 8/5/03

ATTY Case No.	Serial No./ Filing Date	Inventors/Title	Status
		OF SILVER STAINING	
00-1272-C	U.S.S.N. 10/008,978 Filed 12/7/01	Mirkin, Letsinger, Mucic, Storhoff, Elghanian, Taton, Garimella, Li, Park, Lu/ NANOPARTICLES HAVING OLIGONUCLEOTI DES ATTACHED THERE TO AND USES THEREOF	PENDING
01-565-A	USSN 10/125,194 Filed 4/18/02	Mirkin, Nguyen, Watson, Park/ OLIGONUCLEOTI DE-MODIFIED ROMP POLYMERS AND CO- POLYMERS	PENDING
01-599-A	U.S.S.N. 10/291,291 Filed 11/08/02	Storhoff/NOVEL THIOL-BASED METHOD FOR ATTACHING OLIGONUCLEOTI DES TO NANOPARTICLES	PENDING
01-661-A	U.S.S.N. 10/034,451 Filed 12/28/01	Mirkin, Cao, Jin/ DNA-MODIFIED CORE-SHELL AG/AU NANOCRYSTALS	PENDING
01-661-C	U.S.S.N. 10/153,483 Filed 5/22/02	Mirkin, Cao, Jin/ DNA-MODIFIED CORE-SHELL AG/AU NANOCRYSTALS	PENDING
01-661-E	U.S.S.N. 10/397,579 3/26/03	Mirkin, Cao, Jin/ DNA-MODIFIED CORE-SHELL AG/AU NANOCRYSTALS	PENDING
01-1565-A	U.S.S.N. 10/266,983	Park, Taton, Mirkin/ARRAY-	PENDING

ATTY Case No.	Serial No./ Filing Date	Inventors/Title	Status
	Filed 10/08/02	BASED ELECTRICAL DETECTION OF DNA USING NANOPARTICLE PROBES	
01-1633-A	U.S.S.N. 10/266,983 Filed 10/8/02	Park, Taton, Mirkin/NANOPARI CLES HAVING OLIGONUCLEOTI DES ATTACHED THERE TO AND USES THEREFOR	PENDING
01-1705-A	U.S.S.N. 10/108,211 Filed 3/27/02	Nam, Park, Mirkin/BIO- BARCODES BASED ON OLIGONUCLEOTI DE-MODIFIED NANOPARTICLES	PENDING
02-338-B	USSN 10/172,428 Filed 6/14/02	Cao, Jin, Nam, Mirkin/MULTICHA NNEL DETECTION USING NANOPARTICLE PROBES WITH RAMAN SPECTROSCOPIC FINGERPRINTS	PENDING
02-338-C	10/431,341 5/7/03	Cao, Jin, Nam, Mirkin/MULTICHA NNEL DETECTION USING NANOPARTICLE PROBES WITH RAMAN SPECTROSCOPIC FINGERPRINTS	PENDING



COPY
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Case No. 00-713-i8)

In the Application of:

Chad A. Mirkin, et al.

Serial No.: 09/974,007

Filed: October 10, 2001

For: NANOPARTICLES HAVING
OLIGONUCLEOTIDES ATTACHED
THERE TO AND USES THEREFOR

Examiner: Jezia Riley

Group Art Unit: 1637

Confirmation No.: 8209

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Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

MAR 10 2004

SEVENTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

In order to comply with discretionary regulations 37 CFR §§1.97 and 1.98, attached hereto is Form PTO-1449, copies¹ of the documents listed thereon. These documents contain information which the Examiner may consider to be important in deciding whether to allow the present application to issue as a patent.

1. Heller, et al., U.S. Patent No. 4,966,143 issued 02/26/91
2. Kausch, et al., U.S. Patent No. 5,508,164 issued 04/16/96
3. Ewart, et al., U.S. Patent No. 5,922,537 issued 07/13/99
4. An, et al., U.S. Patent No. 5,972,615 issued 10/26/99

¹To the extent that a document is listed and no copy of same is attached, then such document is not at the present time available to the undersigned or is available in the file of a parent application. If a listed document is not in the English language and an English translation is readily available, such translation is also attached; if translation is not attached it is not readily available to the undersigned. If a foreign language patent document is cited, and an English language equivalent is known to the undersigned, then such equivalent patent is also cited on the attached form along with the corresponding foreign language patent and a connecting arrow indicated there between; if no such English language equivalent is cited, then none is known to undersigned.

5. Blackburn, et al., U.S. Patent No. 6,264,825 issued 07/24/01
6. Yguerabide, et al., U.S. Patent No. 6,214,560 issued 04/10/01
7. International Patent WO 94/29484 published 12/22/94
8. International Patent WO 00/25136 published 05/04/00
9. Mohanty J., et al., "Pulsed laser excitation of phosphate stabilized silver nanoparticles," *Proc. Indian Acad.*, Vol. 112, No. 1, p. 63-72 (2000)
10. Nicewarner- Peña S., et al., "Hybridization and Enzymatic Extension of Au Nanoparticle-Bound Oligonucleotides," *J. Am. Chem. Soc.*, Vol. 124, p. 7314-7323 (2002)
11. Whitesides G.M., et al., "Soft Lithography in Biology and Biochemistry," *Annu. Rev. Biomed. Eng.*, p. 335-373 (2001)

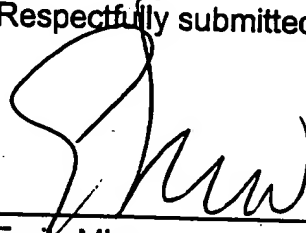
In accordance with MPEP Sections 609 and 707.05(b), it is requested that each document cited (including any cited in applicant's specification which is not repeated on the attached Form PTO-1449) be given thorough consideration and that it be cited of record in the prosecution history of the present application by initialing on Form PTO-1449. Such initialing is requested even if the Examiner does not consider a cited document to be sufficiently pertinent to use in a rejection, or otherwise does not consider it to be prior art for any reason, or even if the Examiner does not believe that the guidelines for citation have been fully complied with. This is requested so that each document becomes listed on the face of the patent issuing on the present application.

The present Disclosure Statement is being submitted in compliance with 37 CFR 1.56 insofar as an Examiner might consider any of the cited documents important in deciding whether to allow the application to issue as a patent, but the citation of each document is not to be construed as an admission that such document is necessarily relevant or prior art. No representation is intended that the cited documents represent the results of a complete search, and it is anticipated that the Examiner, in the normal course

of examination, will make an independent search and will determine the best prior art consistent with 37 CFR 1.104(a) and 1.106(b) and, in the course of each search, will review for relevance every document cited on the attached form even if not initialed.

Early and favorable consideration is earnestly solicited.

Respectfully submitted,



Emily Miao
Registration No. 35,285

Dated: 5-1-03

McDonnell Boehnen Hulbert & Berghoff
300 South Wacker Drive, Suite 3200
Chicago, Illinois 60606
Telephone: (312) 913-0001
Facsimile: (312) 913-0002

FORM PTO-1449
(Rev. 2-32)U.S. Department of Commerce
Patent and Trademark Office

Atty. Docket No.

Serial No.

00-713-18

09/974,007

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(Use several sheets if necessary)

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Applicant:

Chad A. Mirkin, et al.

Filing Date:

October 10, 2001

Group:

1637

U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	1.	4,996,143	02/26/91	Heller, et al.	435	6	04/13/90
	2.	5,508,164	04/16/96	Kausch, et al.	435	6	10/29/93
	3.	5,922,537	07/13/99	Ewart, et al.	435	6	11/8/96
	4.	5,972,615	10/26/99	An, et al.	435	6	01/21/98
	5.	6,264,825	07/24/01	Blackburn, et al.	205	777.5	06/23/99
	6.	6,214,560	04/10/01	Yguerabide, et al.	435	7.1	04/18/97

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation Yes	No
	7.	WO 94/29484	12/22/94	PCT				
	8.	WO 00/25136	05/04/00	PCT				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	9.	Mohanty J., et al. "Pulsed laser excitation of phosphate stabilized silver nanoparticles," <i>Proc. Indian Acad. Sci.</i> , Vol. 112, No. 1, p. 63-72.
	10.	Peña-Nicewarner S., et al., "Hybridization and Enzymatic Extension of Au Nanoparticle-Bound Oligonucleotides," <i>J. Am. Chem. Soc.</i> , Vol. 124, p. 7314-7323 (2002)
	11.	Whitesides G.M., et al., "Soft Lithography in Biology and Biochemistry," <i>Annu. Rev. Biomed. Eng.</i> , p. 335-373 (2001)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if it is in conformance and not considered. Include copy of this form with next communication.

COPY

Hon. Commissioner of Patents and Trademarks

S/N—09/974,007

Atty EM

Re: Applicant - Mirkin, et al.

Case No. 00-713-i8

Nanoparticles Having Oligonucleotides Attached Thereto and Uses Therefor
Date Mailed: May 1, 2003

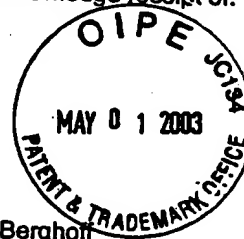
Sir:

Please place the Patent Office receipt stamp hereon and mail to acknowledge receipt of:

- ☒ Transmittal Letter
- ☒ Seventh Supplemental Information Disclosure Statement
- ☒ U.S. PTO 1449 Form with copies of 11 references

Fee Enclosed
\$ 180.00

Respectfully,
McDonnell Boehnen Hulbert & Berghoff
Attorney for Applicant



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